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SOME PSYCHOLOGICAL ASPECTS IN FOREIGN LANGUAGE TRAINING.

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IN ORDER TO DETERMINE WHETHER EXTENSIVE PRIOR LISTENING PRACTICE IN A LANGUAGE COURSE WOULD HAVE ANY BENEFITS IN DEVELOPING SPEAKING AND AURAL COMPREHENSION SKILLS, 19 U.S. ARMY OFFICERS SCHEDULED TO GO TO VIETNAM WERE DIVIDED INTO TWO GROUPS THAT PARTICIPATED IN A SELF-INSTRUCTIONAL PROGRAMED COURSE IN ELEMENTARY VIETNAMESE LASTING 83 HOURS. THE COURSE CONSISTED OF 25 PAIRS OF LESSONS IN WHICH THE FIRST LESSON COVERED AUDITORY COMPREHENSION OF VIETNAMESE WHILE THE SECOND LESSON EMPHASIZED ORAL PRODUCTION. ONE GROUP STUDIED ALL 25 OF THE AUDITORY COMPREHENSION LESSONS BEFORE BEING ASKED TO PRODUCE ANY VIETNAMESE. THE OTHER GROUP ALTERNATED BETWEEN COMPREHENSION AND PRODUCTION LESSONS. THE RESULTS SEEMED TO FAVOR THE ALTERNATION GROUP WHICH DID NOT HAVE THE EXTENDED AUDITORY COMPREHENSION PRACTICE. WHEN VARIATION IN LANGUAGE APTITUDE WAS CONTROLLED THROUGH COVARIANCE ANALYSIS, IT WAS FOUND THAT THE ONLY MEAN DIFFERENCE APPROACHING STATISTICAL SIGNIFICANCE WAS THE LONGER TIME SPENT ON COMPREHENSION LESSONS BY THE GROUP WITH EXTENDED AUDITORY TRAINING. THUS, NO SUPPORT WAS FOUND FOR THE OPINION THAT THE LANGUAGE LEARNER MUST FIRST LEARN TO DISCRIMINATE AMONG THE TARGET LANGUAGE SOUNDS BEFORE HE CONSCIOUSLY ATTEMPTS TO REPRODUCE THEM. THIS PAPER WAS PREPARED FOR PRESENTATION AT THE ANNUAL AMERICAN PSYCHOLOGICAL ASSOCIATION MEETING (CHICAGO, SEPTEMBER 3-7, 1965). (JD)

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Some Psychological Aspects in Foreign Language Training

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Of the many subject matters to which programed instruction may be applied, none, with the exception of mathematics, probably lends itself as well to the PI format as foreign language learning, especially the elementary levels of language learning.

A basic point to be made in this paper is that there exists a symbiotic-like relationship between FL as a subject matter and PI as a training technology which is not limited to immediate pedagogic pay-off. The close, complementary relationship further permits training research to be done with a degree of control that is normally impossible in the live classroom, and with much greater relevance to the skills being shaped than is the case for other subject matters. The first portion of this paper will present a case in point. The findings need ccrroboration, but at a minimum, demonstrate the FL research function to which PI can be put.

During the field test of a programed self-instructional course in elementary Vietnamese, which we had constructed, an experiment was run to determine whether prior listening or "ear training" would have any benefits for acquisition of speaking and aural comprehension skills.

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"Ear training" for this purpose meant exposing the S to the whole range of sounds (linguistically, phonemes) that constitute the meaningful units of spoken Vietnamese and shaping his discrimination skill before he is called upon to utter or produce any of them.

The literature on the proper sequencing of auditory comprehension and oral production practice in language learning is divided. The scientific linguist, Brooks states that the ear dominates the learning and use of speech sounds, and that therefore "ear training" must come first. Hockett, another well-known linguist, on the other hand states that one cannot hear a new language correctly until one has learned to pronounce it first. The experimental evidence is sparse and equivocal.

In this modest little study, 19 Ss took a self-instructional Vietnamese course, requiring a mean of 83 hours to complete, in one of two treatment groups. The course is organized into 25 pairs of lessons where the first of each pair (i.e. 1, 3, 5, 7, ...49) is always a listening-comprehension lesson in which S learns to discriminate among Vietnamese auditory material by associating correct English translation responses with it. The second lesson of each pair (i.e. 2, 4, 6, ...50) is always a speaking or oral production lesson where the stimulus is English and the S must respond in Vietnamese.

Group A (n = 9) the "ear training" group received all 25 listening-comprehension lessons before being called upon to utter any Vietnamese; then all 25 speaking lessons (i.e. 1, 3, 5 ...49. 2, 4, 6, ...50). Group B (n = 10) the "alternation group" alternated between comprehension and speaking lessons so that they would have to respond in Vietnamese before being exposed to the entire Vietnamese sound system or having extended stimulus discrimination practice with it.

The Ss were U.S. Army officers scheduled to go to Vietnam and were, consequently, well-motivated. Treatment assignment was carried out attempting to match the two groups on education. Language apptitude data did not become available until after the initiation of the study.

The questions posed were whether the two self-instructional practice modes would produce any differences in the acquisition of aural comprehension and speaking skills, in time requirements, or in student attitudinal reactions. The question of the two practice modes, ear training vs. alternation training, has considerable intrinsic relevance for FL learning.

Much of the raw data seems to favor the alternation group which did not have the extended "ear training" practice.

When, however, variation in language aptitude was controlled through covariance analysis, as turned out to be necessary, the only measure with a mean difference that approached statistical

significance ($p \cong .10$) was: Time spent on comprehension lessons with Group A, the ear training group taking longer. No stable differences were found for aural comprehension or speaking acquisition measures or for other time requirements.

Thus, no support is found here for the sometimes proffered linguistic dictum that the language learner must first hear and discriminate among the TL sounds before he consciously attempts to reproduce them. The one statistically reliable difference points to the opposite conclusion.

If one is looking for an operational implementation strategy it would seem that on the ground of requiring less time and a tendency to produce somewhat more favorable attitudes, the "alternation training" lesson arrangement in which Ss alternated between comprehension and Vietnamese speaking lessons should be recommended.

Two side issues were also investigated. One dealt with the shift in language aptitude-language proficiency correlation as one looked from the "ear training" to the "alternation training" group. The data are suggestive only due to the small sample size. For Group A the correlation coefficient was found to be .79; for Group B $r = -.24$. What accounts for the discrepancy? The explanation could lie in the experimental treatments, the FL backgrounds, or the varying aptitude levels of the two groups.

Differential FL background, as an explanation, was eliminated through partial correlation analyses in the two groups which resulted in even more disparate correlation coefficients than the previously found .79 and -.24 (viz .88 and -.37). The second possible explanation, i.e., that the experimental treatments themselves had resulted in the disparate functions, was also contraindicated because when the data were regrouped into high and low aptitude Ss, disregarding treatment, a moderate positive correlation (.46) remained for the low group, a low negative correlation coefficient (-.19) was found for the high group. These data suggest, at least, that the language aptitude-proficiency function is not a linear one and that disparities among aptitude-proficiency correlation measures may themselves be related to the language aptitude levels of the groups being examined.

A second and final side issue had to do with the variation one might expect among native Vietnamese speakers in their ability to comprehend tape recorded test responses of U.S. subjects, speaking Vietnamese; and how much "learning" one might expect such Vietnamese listeners to exhibit when exposed to successive recorded test performances.

One student's test tape was used for which each of six native Vietnamese listeners was instructed to listen and transcribe in Vietnamese what he thought the student was trying to say. The

test items were complete statements which the student had translated from printed English to spoken Vietnamese. The scoring system for each item was: 0 for complete unintelligibility, 1 for complete intelligibility and .3 or .7 for intermediate degrees of comprehensibility. The Vietnamese listeners had no knowledge of the course the student had undergone. The data over the six native listeners for the same student on the same test ranged over 25 percentage points from 63 to 88% intelligibility, with a mean of 81.

Background and organismic listener characteristics that could account for such variation readily come to mind; such things, for example, as differential past exposure to Americans and American speech suggest themselves. The main point to be drawn from these data is clear. The descriptor "understandable to a native" when used as an index of student proficiency or to specify training goals is at best an oversimplification. These data make the rejoinder "what type of native?" quite appropriate.

In the same vein, the scoring operation demonstrated that native listeners hearing successive students performing on the same test "learn" the test items even though care was taken to randomize the item order for S to S. Consequently test grades get successively higher as one proceeds along in the grading sequence. Order effect accounted for a 13% increase in intelligibility

from tests scored first to those scored third, with the greatest portion of that effect occuring between first and second position.

Such biases, from inter-listener heterogeneity and test scoring sequence had to be eliminated in order to reach correct conclusions in the experimental comparison described and in order to assess the pedagogical effectiveness of the course.

TABLE 1

Comparison of Measures on Ss Receiving and Not Receiving Prior Listening-Comprehension Training

Measure	Group A: Ear Training (n = 9) Mean		Group B: Alternation Training (n = 10) Mean	
Army Language Aptitude Test	23.8		33.4	
Age	29.1 yrs.		27.5 yrs.	
Comprehension Tests	85.1%		93.1%	
Comprehension Tests (Adjusted)		88.0		90.1
Speaking Tests	73.3%		73.4%	
Speaking Tests (Adjusted)		74.9		71.8
Combined Tests	79.3%		83.2%	
Combined Tests (Adjusted)		81.5		81.8
Army Language Proficiency Test (Aural Comprehension)	21.2		19.5	
Army Language Proficiency Test (Adjusted)		21.5		19.3
Time on Comprehension Lessons	53.1 hrs.		29.1 hrs.	
Time on Comprehension Lessons (Adjusted)		46.7		32.3
Time on Speaking Lessons	23.8 hrs.		23.5 hrs.	
Time on Speaking Lessons (Adjusted)		21.0		24.8
Combined Time	76.8 hrs.		52.6 hrs.	
Combined Time (Adjusted)		67.6		57.1
Student Attitude Towards Course	66.5		76.2	
Student Attitude Towards Course (Adjusted)		69.4		73.6

TABLE 2

Analysis of Covariance for the Experimental Groups With Aptitude as the Covariable

Measure	df	Adjusted MS (Within Groups)	Adjusted MS (Between Groups)	F	P
Comprehension Tests	1/14	48.1	27.6	< 1.0	n.s.
Speaking Tests	1/12	52.0	28.1	< 1.0	n.s.
Combined Tests	1/12	41.7	0.2	< 1.0	n.s.
Army Language Proficiency Test	1/15	15.6	19.8	1.3	n.s.
Time on Comprehension Lessons	1/14	208.5	642.2	3.1	≅.10

	A Ear Training (n = 9) Mean		B Alternation Training (n = 10) Mean	
Army Language Aptitude Test	23.8		33.4	
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Army Language Proficiency Test	1/15	15.6	19.8	1.3	n.s.
Time on Comprehension Lessons	1/14	208.5	642.2	3.1	≅.10
Time on Speaking Lessons	1/14	64.5	45.2	< 1.0	n.s.
Combined Time	1/14	485.0	347.1	< 1.0	n.s.
Student Attitude	1/16	283.4	69.3	< 1.0	n.s.